

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF EAST KENTUCKY POWER)	
COOPERATIVE, INC. FOR A CERTIFICATE OF)	
PUBLIC CONVENIENCE AND NECESSITY TO CON-)	CASE NO. 10062
STRUCT CERTAIN ELECTRIC TRANSMISSION AND)	
DISTRIBUTION FACILITIES IN JOHNSON, FLOYD)	
AND MAGOFFIN COUNTIES IN KENTUCKY)	

O R D E R

PROCEDURAL BACKGROUND

On October 20, 1987, East Kentucky Power Cooperative, Inc. ("EKPC"), filed an application for a certificate of public convenience and necessity to construct three new substations, approximately 30.75 miles of 69 KV transmission lines, and miscellaneous system improvements. The proposed facilities were estimated to cost a total of \$5,759,400. EKPC proposed to use its general funds to provide interim financing for the proposed facilities, pending approval of permanent financing by the Rural Electrification Administration.

A hearing on EKPC's application was held before the Commission on January 26, 1988. EKPC was the only party to this proceeding. Appearing on behalf of EKPC were: David Hopper, Director of EKPC's Transmission Division; James R. Adkins, Manager of the Rate Department of EKPC's Finance Division; Paul C. Atchison, Jr., Manager of EKPC's Systems Planning Department; and

Don M. Combs, Assistant Manager of Big Sandy Rural Electric Cooperative Corporation.

After the hearing, the Commission ordered EKPC to respond to additional questions concerning a proposed increase in the wheeling rates of Kentucky Power Company ("KPC"). EKPC filed its responses on March 25, 1988.

DISCUSSION

EKPC's proposed construction is designed to provide direct service to its Middle Creek, Jenny Wiley, and proposed Watergap Substations. It calls for approximately 30.75 miles of 69 KV transmission lines to be strung between its Thelma and Sublett Substations. The transmission line would be routed through the Middle Creek, Jenny Wiley and proposed Watergap Substations. Both the Jenny Wiley and Middle Creek Substations would be converted to 69 KV operations. Additionally, breaker stations would be constructed at the Thelma and Sublett Substations to permit the closed operation of the line. Also included in the plan is the construction of the Watergap Substation. According to EKPC, the total cost of this construction is expected to be \$5,759,400. The annual costs of operation, maintenance and fixed charges of these proposed facilities is expected to be \$841,576.¹ The proposed construction will increase EKPC's annual cost of service by \$483,000.²

¹ Application of EKPC, October 20, 1987, p. 2.

² Transcript of Evidence, January 26, 1988, p. 43.

EKPC currently provides power to its Jenny Wiley and Middle Creek Substations through KPC's transmission system. Power is provided at a concurrent exchange rate at 1.5 mills/KWH under the terms of a 1963 agreement.

In February 1985, EKPC formally requested that KPC provide concurrent exchange service to its proposed Watergap Station. The Watergap Station was intended to alleviate existing load conditions on EKPC's Jenny Wiley and Middle Creek Substations. During the 2 years which followed EKPC's request for service, negotiations between EKPC and KPC apparently stalled over the concurrent exchange rate. According to EKPC, KPC made concurrent exchange service to the Watergap Station contingent upon EKPC's acceptance of a 3.75 mills/KWH exchange rate for all power wheeled between the two utilities.

According to the findings of a study by EKPC's System Planning Department,³ direct service to the Middle Creek, Jenny Wiley and the proposed Watergap Substations is more advantageous than continued service through KPC facilities at the proposed 3.75 mills/KWH rate. The study considered two scenarios: 1) continued service through KPC at a 3.75 mills/KWH concurrent exchange rate; and 2) direct service through EKPC lines. The study concluded that the most significant benefit of direct service was better reliability. "EKPC outage records indicate," the study stated,

³ "Study of Future Service to Middle Creek/Jenny Wiley Area," EKPC System Planning Department, April 1987. Exhibit III of EKPC Response to Commission Order of November 23, 1987.

"that outages to these substations [Jenny Wiley and Middle Creek] have been relatively high in number and excessive in duration. . . [Direct Service] should significantly reduce the outage times that Middle Creek and Jenny Wiley Substations have been experiencing."⁴ The study also found that providing direct service would cost approximately \$1 million less in 1987 present worth dollars than continued service from KPC at the higher concurrent exchange rate.

Reliability

The Commission's analysis of EKPC's historical outage data leads it to conclude that the Middle Creek and Jenny Wiley Substations are not significantly less reliable than the rest of the EKPC system, contrary to the EKPC study. A review of EKPC's outage data for the years 1981 through 1986⁵ shows that the system-wide average outage time per substation (excluding Middle Creek and Jenny Wiley) was 46 minutes; for Middle Creek only, 104 minutes; for Jenny Wiley only, 48 minutes; for Jenny Wiley and Middle Creek combined, 76 minutes. The Middle Creek and combined Jenny Wiley/Middle Creek outage time averages are distorted by the extraordinary year of 1985 in which the Middle Creek Substation experienced an outage time of 437 minutes. The Commission believes this year to be extraordinary because it represents 70%

⁴ Ibid, pp. 2-5.

⁵ Exhibits I and II, EKPC Response to Commission Order of December 29, 1987.

of the outage time experienced during the 6-year period. Moreover, Mr. Atchison testified that outages experienced during 1985 on the Middle Creek Substation were "unusual."⁶ If this extraordinary year is excluded, the Middle Creek average outage time is just 32 minutes and the combined Jenny Wiley/Middle Creek outage time average is reduced to 40 minutes. These averages are below the EKPC system-wide average, and strongly suggest that the Middle Creek and Jenny Wiley Substations are as reliable as the rest of the EKPC system substations.

The Commission notes that, in the last 6 years for which outage data is available, the Jenny Wiley substation did not experience any outage time in 4 of those years and the Middle Creek substation did not experience any outage time in 3 of those years. These facts indicate both substations' reliability to be adequate.

Present Worth Analysis

To support its application, EKPC has presented a present worth analysis⁷ comparing the total costs under two alternative scenarios. Alternative One reflects EKPC continuing to receive service from KPC. Alternative Two reflects EKPC constructing its own facilities and thus providing its own direct service. The results of this study purport to show approximately \$1 million in

⁶ Transcript, p. 24.

⁷ EKPC System Planning Department, supra, note 3.

present worth savings if EKPC were to provide its own direct service.

The Commission is concerned that some of the assumptions used in this analysis are not adequately supported and may lead to unreliable results. These assumptions include an increase in the concurrent exchange rate from 1.5 mills/KWH to 3.75 mills/KWH, a 6 percent inflation rate on the estimated yearly costs, a 6.3 percent growth rate on the total exchange charge, and applying the growth rate every year over the 30-year study period.

EKPC's analysis assumes a 3.75 mills/KWH concurrent exchange rate. KPC had proposed this exchange rate during the negotiations with EKPC. At the hearing Mr. Hopper testified that the Federal Energy Regulatory Commission ("FERC") had approved a uniform increase in the wheeling rate of the American Electric Power System ("AEP"), of which KPC is a subsidiary, to 3.75 mills/KWH. EKPC subsequently supplied the Commission with a copy of the FERC Order supposedly granting this increase. The Order,⁸ however, involved only a mutually agreed modification to an exchange agreement between Indiana and Michigan Electric Company, another AEP subsidiary, and Illinois Power Company. Upon subsequent inquiry by the Commission, Mr. Hopper retracted his statement and EKPC acknowledged that FERC has yet to approve a 3.75 mills/KWH wheeling rate for the AEP system or KPC specifically.⁹

⁸ FERC Docket No. ER-85-293.

⁹ Item 1, EKPC Response to Commission Order of March 18, 1988.

Furthermore, EKPC admitted having no knowledge of any request to FERC by KPC to increase its wheeling rate.

The Commission must consider EKPC's application based upon the known and current exchange rate. Until an increase in the concurrent exchange rate occurs, the present worth analysis cannot justify the proposed construction. The Commission recognizes that a change in the exchange rate would require a renewed examination of EKPC's application. However, we expect that EKPC will protect the interests of its customers by taking all steps necessary to ensure that the exchange rate stays at the lowest reasonable level.

The Commission is also concerned with the analysis' assumption of a 6 percent inflation rate used to estimate cost increases within each alternative. The year-to-year increases in the Consumer Price Index for the months of January, February and March, 1988, have been 4.0, 3.9, and 3.9 percent, respectively.¹⁰ Although these figures indicate that inflation has increased somewhat from previous months, it is still significantly below the 6 percent level used in the present worth study. The Commission believes that a more current and documented estimate of expected inflation must be included in a study of this nature.

The 6.3 percent growth rate that was applied to the wheeling charge in Alternative One consisted of a combined 3.2 percent

¹⁰ Current 1988 yearly Consumer Price Index (unadjusted). U.S. City Average (1982-1984 = 100) for Urban Consumers.

exchange cost increase and a 3.0 percent inflation rate. This growth rate is applied to the total exchange annually on a compounded basis. However, the Commission is aware that the timing of the increases in these charges has a significant effect on Alternative One's computed present worth. That is, by failing to apply the increases on a more realistic and historical step-wise basis, the results of the exchange charges' present worth calculations are biased upwards. Further, the Commission is doubtful that a 6.3 percent growth rate will be maintained every year for 30 years. This assumption leads to a further upward bias in the present worth analysis.

The susceptibility of the present worth study to changes in the concurrent exchange rate, inflation rate, growth rate, and the timing of the total exchange charge increases leads the Commission to find that the results are not sufficiently reliable to support the issuance of a certificate of public convenience and necessity. Therefore, the Commission is of the opinion that EKPC's present worth study should be rejected.

FINDINGS AND ORDER

The Commission, having considered the evidence of record and being advised, is of the opinion and finds that:

1. Construction of the proposed facilities would increase EKPC's cost of serving Johnson, Floyd, and Magoffin counties from \$267,000 to \$750,000, an increase of 181 percent.
2. The Jenny Wiley and Middle Creek Substations are currently providing reliable service to EKPC's customers.

3. The assumptions contained in EKPC's present worth study are unsupported and unreliable. The study's conclusions cannot be accepted.

4. Construction of the proposed facilities would result in unnecessary duplication of existing facilities.

5. EKPC's application for a certificate of public convenience and necessity to construct facilities in Johnson, Floyd, and Magoffin counties of Kentucky, should be denied without prejudice.

6. EKPC should continue to monitor its service area. If existing conditions should change to justify construction of the proposed facilities, EKPC may re-submit its application for a certificate of public convenience and necessity.

IT IS THEREFORE ORDERED that EKPC's application for a certificate of public convenience and necessity to construct new facilities in Johnson, Floyd, and Magoffin counties of Kentucky, be and it hereby is denied without prejudice.

Done at Frankfort, Kentucky, this 24th day of May, 1988.

PUBLIC SERVICE COMMISSION

Richard D. Hermann, Jr.
Chairman

Robert M. Davis
Vice Chairman

Spencer W. Williams
Commissioner

ATTEST:

Executive Director